

Apple-Works Forum

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Support for AppleWorks and ///EZ Pieces Users

Letters to NAUG

Help with APA-Style Output

Dear NAUG:

Has anyone developed AppleWorks templates that make it easier to use the AppleWorks word processor to produce papers that follow the American Psychological Association (APA) style?

Tom Tapscott
Belleville, Illinois

[Ed: I don't know of any APA-style templates for AppleWorks, but there is a stand-alone word processor that meets your needs. Pergamon Software publishes two versions of Manuscript Manager, a word processing program that produces documents in either APA or Council of Biology Editors (CBE) style. Manuscript Manager is an exceptional product; you tell it what type of reference you want (book, journal, monograph, etc.) and it prompts you for the data required for the reference list. You don't need to remember the appropriate style for each reference; Manuscript Manager automatically handles that task.]

A utility program lets Manuscript Manager read text (ASCII) files; you can use AppleWorks until you are ready to insert your references, then "print" your AppleWorks file on a disk and read that file into Manuscript Manager.

The APA version of Manuscript Manager costs \$175; the CBE version costs \$195. Demonstration disks cost \$10 each from Pergamon Software, (914) 592-7700. Specify that you want the Apple version of the program and also request the File Conversion Utility.]

The **National AppleWorks Users Group (NAUG)** is an association that supports AppleWorks users. NAUG provides technical support and information about AppleWorks and enhancements to that program. Our primary means of communicating with members is through the monthly newsletter entitled the **AppleWorks Forum**.

A Way to Test Printer Codes

Dear Cathleen,

It's sometimes difficult to "decode" the printer codes that appear in the appendices of most printer manuals. Often you end up entering the codes you think are correct into the AppleWorks printer configuration menus, then test your settings only to find they are incorrect and must be re-entered. I use the AppleWorks spreadsheet module to test my printer codes without telling AppleWorks I want to define a new custom printer.

Here's how:

1. Create a new spreadsheet document from scratch and type in some text as a label.
2. Enter an Apple-O to go to the Options Menu.
3. Enter an SC (for "Special Codes") and press the Return Key.
4. Enter the codes you want to test. Enter a caret ("^", a shifted-6) after the codes, just as you do when you enter codes for a custom printer.
5. Press the Escape Key to return to the spreadsheet.
6. Issue an Apple-P command to print the spreadsheet and examine your output. See if the code has the impact you desire. Then you can enter the code into your custom printer setup.

Robert Sutherland
Toronto, Ontario, Canada

AppleWorks Forum

Editor: Cathleen Merritt
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How to Transfer Values between Spreadsheets

Dear Cathleen,

Like many AppleWorks spreadsheet users, I keep monthly worksheets and transfer my monthly totals into an annual summary statement. Here are the steps I use to make this transfer and avoid the problems that occur when you try to transfer calculated values between spreadsheets:

1. Use the Copy Command to copy the cells you want to transfer. Copy those cells into a series of empty rows at the bottom of the spreadsheet. If there are formulas in these cells, specify you want to copy with "No Change".
2. Use the Move Command to move the rows at the bottom of the spreadsheet onto the AppleWorks clipboard.
3. Use the Apple-Q command to transfer to the second spreadsheet.
4. Issue an Apple-9 command to move to the bottom of the "receiving" spreadsheet.
5. Issue an Apple-C command and indicate you want to copy "From the clipboard". Select "Values Only" from the From Clipboard Menu.
6. Use the Apple-I command to insert a row where you want the data to appear in the second spreadsheet.
7. Use the Apple-C command to copy the data from the cells at the bottom of the spreadsheet into the appropriate location.
8. Use the Apple-D command to delete the rows from the bottom of the spreadsheet.

Philip Hamm
Hiroshima, Japan

[Ed: Mr. Hamm's procedures let you copy any column or row between spreadsheets. If you have AppleWorks 2.0 or later, you can even transfer cells that contain calculated values.]

While this is a workable approach to transferring data, I find it easier to use the Block Copy module on the TimeOut SpreadTools disk. Block Copy lets me transfer any set of cells between spreadsheets

and gives me the option of retaining the original formula or transferring the values calculated in the original cell. See the September 1988 issue of the AppleWorks Forum for a description of the SpreadTools modules.

Spreadsheet users should also see the article entitled "How to Transfer Data Between Spreadsheets" in the March 1987 and April 1987 issues of the AppleWorks Forum.]

How to Fill Out Forms with Mail Merge

Dear Cathy,

Your reply to a letter in the January 1989 issue of the *AppleWorks Forum* describes how to use the AppleWorks Mail Merge module to fill out large forms. However, when you use this technique and try to print more than one category on the single line, the placement of the second and all following categories depends on the length of the entry in the first category on the line.

For example, try to use the Mail Merge module to fill out a form that provides separate spaces for first and last name. When you print, the starting point of the last name will vary depending on the length of the first name in each record.

The solution is to use TimeOut SuperFonts. SuperFonts' Tab Command lets you specify an absolute starting position regardless of the length of other entries on the line. SuperFonts specifies tabs from the left margin, so the SuperFonts command <t5.2> sets the tab 5.2 inches from the left margin.

I use the font Courier.12 when completing forms. This is a mono-spaced font that prints at ten characters per inch and at six lines per inch. This corresponds to the vertical and horizontal spacing of most pre-printed forms.

Mark Baniak
Park Ridge, Illinois

[Ed: If you use AppleWorks 2.0 or earlier, you can also use the Mail Merge module in AutoWorks to complete pre-printed forms.]

Why Are My Data Base Records Already Filled In?

Dear NAUG,

I have a problem with one of my AppleWorks data base files. I do not get a blank record when I issue an Apple-I command. I get into Insert New Records mode, but the supposedly blank record on the screen is already filled in. I have to yank out the data with the Apple-Y command before I can enter new data. What is causing this problem?

JoAnn Doone
Sarasota, Florida

[Ed: AppleWorks lets you define "standard entries" for a data base file. A "standard entry" appears automatically in every record you create. This is a useful AppleWorks feature; you can enter "FL" as the standard entry for the category "STATE", and AppleWorks will automatically insert "FL" as the state code in every new record.]

You define the standard entries by entering an Apple-V command. AppleWorks puts you in "Set Standard Values" mode and displays a blank record. Everything you enter on that screen will automatically appear in all new records. (If you do not want the default to appear in a particular record you must either delete the default value with the Apple-Y command or overwrite the entry with the overwriting cursor.)

I believe you accidentally typed an Apple-V and entered a complete record as a standard default value. When you tell AppleWorks you want to insert new records, the program is showing your default entries.

You should blank these standard values by issuing an Apple-V command and using the Apple-Y command to yank out the current entries. Then press the Escape Key to indicate you are done with the "Set Standard Values" screen.]

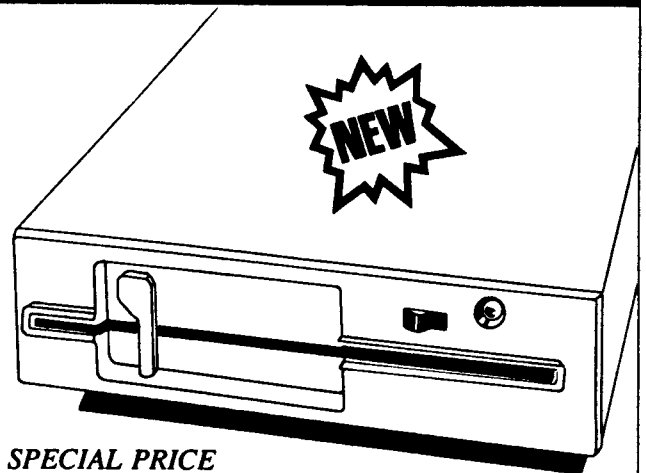
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The RocketChip: A New Way to Speed Up AppleWorks

by David Rodwell

If you have AppleWorks spreadsheets that take too long to recalculate or data base files that take too much time to sort, you should consider speeding up your Apple computer.

The RocketChip is the newest of three accelerator products that speed up AppleWorks on Apple II, II+, IIe, or IIC computers. My tests indicate that the RocketChip runs AppleWorks slightly faster than the other accelerators, but I encountered some hardware compatibility problems using the RocketChip with some popular enhancements. I also have some concerns about the readiness of this product for the AppleWorks community.

What Is the RocketChip?

The RocketChip replaces the 6502 or 65C02 central processing unit in the Apple II, II+, IIe, or IIC computer. (The Apple IIGS and IIC Plus use different processors; the RocketChip is not compatible with those systems.) The RocketChip consists of a 65C02 processor running at 5 megahertz (a standard Apple II runs at 1.04 megahertz) and a high-speed cache memory. The fast processor and the RAM cache allow the computer to run significantly faster than a standard Apple system.

Installing the chip is easy. The documentation shows you how to remove the original processor and insert the RocketChip in the empty socket. Make certain you press the RocketChip firmly in place; I originally thought my chip was defective until I gave it one last push to seat the chip in its socket. The 65C02 is soldered directly into the motherboard in some late model Apple IIC comput-

ers; you should have the RocketChip installed by a competent technician if your computer has a soldered chip.

The RocketChip speeds up internal operations within the computer, but not the speed with which the system accesses peripheral devices such as disk drives or printers. Software that accompanies the chip makes it possible to change the speed at which the chip accesses peripherals connected to the different slots in your system, but most AppleWorks

users will not need this software. The manufacturer's default settings work well with AppleWorks. In most cases, you can install the chip, boot up AppleWorks, and watch it fly!

What You Get with the RocketChip

The RocketChip comes with a 5.25-inch disk with programs that let you change the default settings on the chip, and a preliminary set of documentation.

The preliminary documentation consists of 14 pages of installation directions and two pages of information about how to use the utility programs that accompany the chip. The package also includes a Warranty Registration Card and a letter explaining that the company will send the final documentation to all registered RocketChip owners. The letter does not promise a specific shipping date for the final version of the instructions.

The preliminary documentation does an effective job of describing how to install the chip in different Apple II-series computers. However, the two pages of instructions on how to use the chip are incomplete and inadequate. The utility software that lets you change the chip's speed is not menu-driven or

The RocketChip is slightly faster than the other accelerators, but I have some concerns about the readiness of this product.

Figure 1: Word Processor

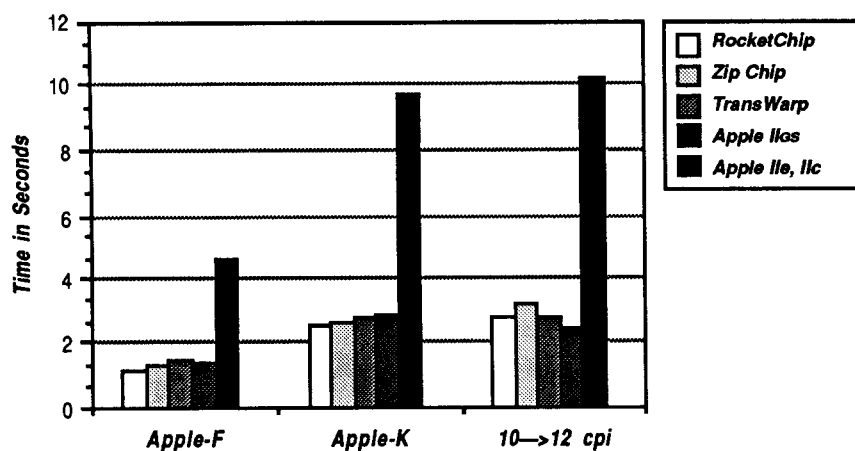


Figure 2: Data Base

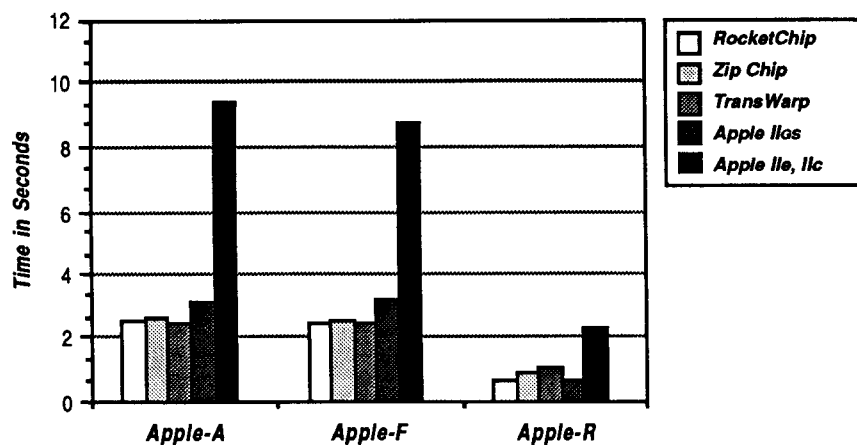
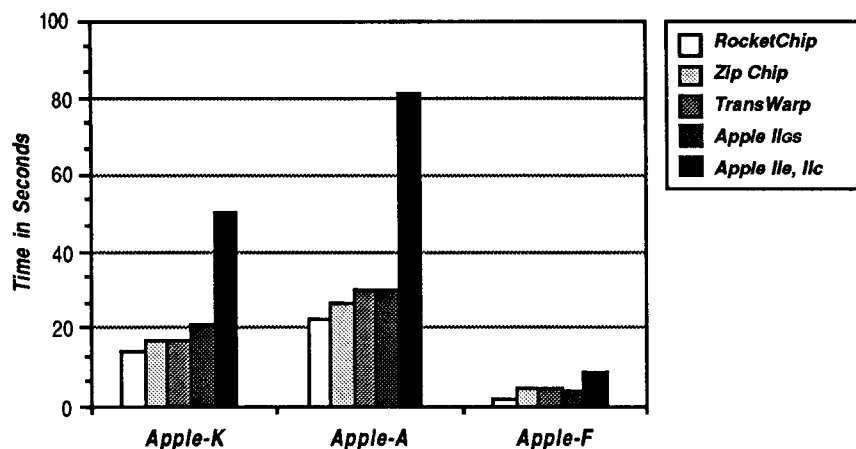


Figure 3: Spreadsheet



user friendly; the programs come on a bootable disk that leaves you in Applesoft BASIC. You must know the appropriate ProDOS or DOS 3.3 commands to run the utility programs on the disk.

The RocketChip does not come with programs that let you test the operation of the chip nor with diagnostic routines to help you locate the source of problems when things go wrong. (Diagnostic software included with the Zip Chip helped me diagnose a defective chip when I tested that accelerator product; I missed those programs when I had problems with my incorrectly-installed Rocket-Chip.)

The Speed of AppleWorks

I conducted a series of nine tests to study the Rocket-Chip's impact on the speed of AppleWorks. These are comparable to the tests I used in the article comparing the speed of the Zip Chip and TransWarp accelerators; those results appear in the July 1988 issue of the *AppleWorks Forum*.

I repeated each test ten times using a RocketChip-enhanced Apple IIe equipped with a one-megabyte Applied Engineering RamWorks card. Then I replicated the tests with an Apple IIc equipped with a one-megabyte Z-RAM Ultra card. The times were identical for both systems; the graphs in *Figures 1-3*

report the mean times for the tests conducted on the IIe computer.

I used AppleWorks 2.0 enhanced with the Applied Engineering AW 2 Expander for these tests; this kept the results comparable with the findings in the earlier study. While times will differ for AppleWorks 2.1, the relative times for these speed-up products should remain constant.

AppleWorks Word Processor

I built a 42K AppleWorks word processor file consisting of 17 pages of single spaced text. I used that file for the following three tests:

1. I inserted a “#” symbol at the end of the document and used the Apple-F command to find that symbol.
2. I used the Apple-K command to calculate the page breaks in the document.
3. I reformatted the document by changing the characters per inch from 10 cpi to 12 cpi using the CI command.

Figure 1 summarizes the results of these tests. The findings suggest that the RocketChip executed these AppleWorks commands significantly faster than a standard Apple IIe or IIC computer, and slightly faster than the other accelerator products.

Data Base Tests

I tested the speed of the RocketChip-equipped computer operating on a data base containing 360 names and addresses with 5 categories per record. The file used 49K on the AppleWorks desktop.

I conducted the following tests:

1. I used the Apple-A command to sort the file into alphabetical order based on each person's last name.
2. I used the Apple-F command to find the last record in the file.
3. I used the Apple-R command to select all records that matched a single decision rule.

Figure 2 summarizes the results of these tests. Overall, the RocketChip-equipped computer ran approximately 3.5-times faster than the unen-

hanced IIe system and slightly faster than the other accelerator products.

AppleWorks Spreadsheet Tests

I constructed a 3,996-cell spreadsheet using all the cells in Columns A-D. Cell A1 contained a starting number; all other cells contained a formula that added one to the value in the previous cell.

I conducted the following tests:

1. I used the Apple-K command to recalculate the spreadsheet.
2. I used the Apple-A command to re-sort the rows in reverse order.
3. I put a label in cell D999 and used the Apple-F command to find that text.

Figure 3 summarizes the results of these tests. The RocketChip-equipped system executed these commands significantly faster than a standard Apple IIe or IIC and noticeably faster than the other accelerator products.

The RocketChip and TimeOut

I tested the RocketChip for compatibility with a number of the TimeOut enhancements, including UltraMacros, QuickSpell, Thesaurus, and some of the accessories on the DeskTools disk. I found that all these TimeOut applications worked well on the RocketChip-enhanced computer. I loaded TimeOut QuickSpell and the associated dictionaries onto a RAM disk and was astounded by the speed of the spell checking program. QuickSpell was able to check a five page document in less than 7 seconds without any disk changes.

Hardware Incompatibilities

Unfortunately, the RocketChip is not compatible with some popular hardware expansion products. Specifically, the RocketChip is incompatible with Applied Engineering RamFactor cards, with most Apple-brand memory expansion cards, and with the No-Slot Clock. The RocketChip is compatible with RamWorks and Z-Ram Ultra memory expansion cards, and with Apple-brand cards produced after August 1988. Bits and Pieces Technology, (developers of the RocketChip) is aware of these

incompatibilities and is preparing ProDOS and AppleWorks patches that rectify these problems. The company says it will supply these programs free when it delivers the final documentation to all registered RocketChip owners.

The Competition

The RocketChip is the latest in a series of products that speed up Apple II, II+, IIe, and IIfx computers. The Applied Engineering TransWarp card requires a slot in your computer, but carries its own high speed memory chips to insure compatibility with your system. The TransWarp card uses DIP switches to control the speed at which it addresses the different slots in the Apple; some users prefer that method to the software settings used by the Zip Chip and RocketChip. The TransWarp card is compatible with all AppleWorks products and Apple II hardware enhancements and speeds up AppleWorks to about three times its normal speed. If you use a IIe and have an empty slot in your system, the TransWarp card is an attractive and thoroughly tested speed-up alternative for your computer.

The Zip Chip (produced by Zip Technology), is similar in design and construction to the RocketChip. *[Ed: Zip Technology and Bits and Pieces are now in litigation about possible patent infringements because of the similarities in their products.]* The Zip Chip runs at a maximum speed of 4 megahertz; about 20% slower than the 5 megahertz RocketChip.

The speed difference between the RocketChip and the competing products will be important to some users, but the quantum jump in performance comes when you install any one of these accelerators in your computer. I consider the speed differences between the products minor.

Conclusion

Once you run AppleWorks on an accelerated IIe or IIfx, you will find it difficult to be patient with the program on a standard system. All three accelerator products make your computer far more responsive and should eliminate your concerns about the operating speed of AppleWorks.

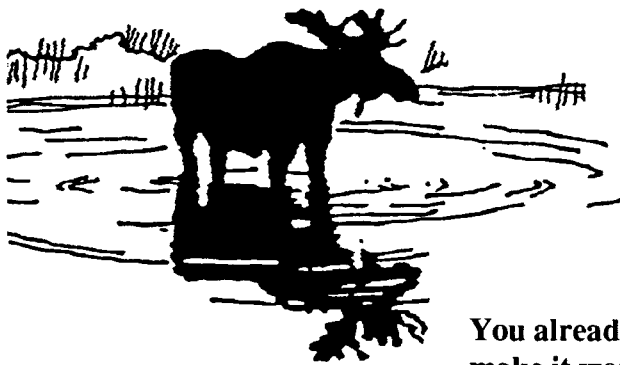
Choosing between these speed-up products is difficult. If you have an Apple IIe with an extra slot, consider the TransWarp card. It is easy to configure, carries its own high speed memory, is compatible with all popular hardware enhancements, and has proven reliable with thousands of users. The TransWarp Card is slightly slower than the RocketChip, but it is comforting to know that you do not have to remove any parts from your computer and that you have a time-tested product.

If you have an Apple IIfx or do not have an extra slot in your IIe, you must choose between the Zip Chip and the RocketChip. Despite questionable marketing practices by Zip Technology (Zip advertised and accepted orders for the product more than six months before they started deliveries), the Zip Chip is compatible with most memory expansion cards, and includes better documentation, diagnostics, and utility software.

The RocketChip has excellent potential. It runs AppleWorks somewhat faster than the other accelerator products; this difference will be noticeable when you work with large data files. However, I am concerned about the RocketChip's present incompatibility with some popular Apple enhancement products, its inadequate documentation, its unfriendly configuration programs, and its lack of diagnostic software. If you use your computer exclusively for AppleWorks and do not have a RamFactor or Apple memory expansion card, you can plug in a RocketChip and immediately enjoy the extra speed of this product. The rest of us probably should consider the TransWarp card or Zip Chip, or we should wait while Bits and Pieces finishes its work on the documentation and utility software for this powerful product.

[The RocketChip has a suggested retail price of \$189 and is available at significant discounts from mail order dealers.]

[Dr. David Rodwell is an Administrative Assistant in Research and Data Processing for the Plymouth-Canton (MI) Community Schools.]



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How to Right Justify Text in the Word Processor

by Warren Williams

Although there is no Right Justify Command in AppleWorks, you can always right justify your AppleWorks word processor output. The secret is to integrate AppleWorks' word processor and spreadsheet modules. The process is easy; you create right justified text in the AppleWorks spreadsheet and use the AppleWorks clipboard to transfer that text into the word processor.

Here's how:

1. Create a spreadsheet template with the width of column A set to the width of your standard printed line for word processor documents. For example, if you normally accept the AppleWorks defaults, you print at 10 characters per inch, with a Platen Width setting of 8.0, and Left Margin and Right Margin settings of 1.0. Thus, you print 60 characters per line. You should make Column A in the spreadsheet 60 characters wide.
2. Enter an Apple-V command and set the standard Label Format to "Right Justify".
3. Issue an Apple-O command to go to the Options Menu and issue a PH command to turn off the Page Headers. This deletes the file name, page number, and date from the information you will move to the word processor.
4. Issue an Apple-S command and save the template. You can re-use this template whenever you want to right justify some text for the word processor.
5. With the spreadsheet on the screen, enter the text you want to right justify.
6. Issue an Apple-P command and "print" the rows that contain your text "To the clipboard for the word processor".
7. Issue an Apple-Q command and bring the word processor document onto the screen.
8. Place the cursor at the beginning of the line where you want the right justified text to appear.
9. Issue an Apple-C command and indicate you want to copy "From the clipboard". The text you entered in the spreadsheet will be right justified in the word processor document. If the text "wraps" to the next line, you made your spreadsheet column too wide, return to your spreadsheet and narrow the width of Column A.

At first these steps seem time consuming and tedious. But once you become comfortable with the process, you can easily integrate these two modules and get right justified output from the AppleWorks word processor.

[Dr. Warren Williams teaches in the Educational Technology program at Eastern Michigan University. He is a technical advisor to NAUG and a frequent contributor to the AppleWorks Forum.]

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RepairWorks: A Program that Recovers Damaged AppleWorks Files

by Bruce Shanker

RepairWorks is an easy-to-use, menu-driven program that recovers many damaged AppleWorks word processor and data base files. If AppleWorks cannot read a file on a disk, you boot up RepairWorks, specify the path to the damaged file, and tell the program where you want to store the reconstructed data. RepairWorks then writes an AppleWorks or ASCII text file containing your recovered data.

Functionality

AppleWorks users will be comfortable with RepairWorks' menu-driven format. *Figure 1* depicts the RepairWorks Main Menu that appears when you boot the program.

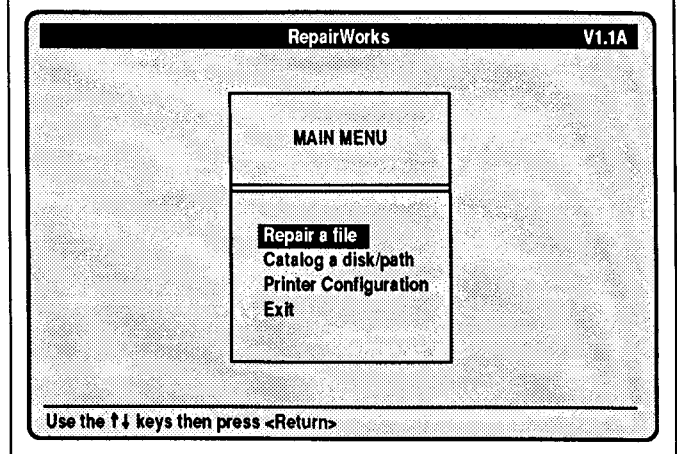
If you choose option 1, RepairWorks scans the disk drives and displays the name of the disk in each drive; you select the disk with the damaged file. If the file is in a subdirectory, you must enter the complete ProDOS pathname to the file.

Once you select the location of the damaged file, RepairWorks lists the files on the disk. You highlight the file you want to recover and press the Return Key. RepairWorks attempts to read the file and suggests a name for the file that will store the recovered data. You can accept this default or specify a new disk for the file. (Although you can store the repaired file back on the original data disk, there is good reason to avoid storing recovered data on a potentially damaged disk.)

Recovering Data Base Files

RepairWorks recovers AppleWorks data base files by creating an ASCII text file that contains the data it can salvage from the original file; you use this file to create a new data base. RepairWorks pro-

Figure 1: RepairWorks Main Menu



vides information about the recovered file, including the number of categories in the original file, the names of the categories, and step-by-step instructions on how to create a new data base from the text file. I found those directions useful and suggest you always accept a printed copy of this information; the number of categories in the recovered file is essential to create the new data base file.

If RepairWorks cannot recover the file, the program tries to describe the problem. For example, the program cannot recover files with damaged "pointers" (pointers are a way programs keep track of where they are in a data file); the program notified me of this problem.

Recovering Word Processor Files

RepairWorks offers two file recovery methods for word processor files; the program can either create a new AppleWorks word processor file with all formatting commands intact, or it can generate an ASCII text file with the formatting commands enclosed in brackets ([^]). Of course, the first

method is best; this approach preserves both the text and format of the original word processor file. However, the second method appears more robust; it can recover some files even when the first method fails. I suggest you create both AppleWorks word processor and text files so you can use either file to create a new word processor document.

Unlike the data base recovery routines, the word processor segment of the program does not provide any analysis of the recovered file. While experienced AppleWorks users will not miss this omission, step-by-step directions would help the novice faced with the task of creating a new word processor file from the recovered text file on the disk. *[Ed: See the sidebar "How to Read ASCII Text Files" for information about how to read a text file into AppleWorks.]*

Does It Work?

RepairWorks is a file recovery, not a disk recovery program; the success of RepairWorks depends on the cause and extent of the problem with the data file. I tested RepairWorks on 32 files I received from NAUG members and two files sent by Gary Morrison, the author of RepairWorks.

Twelve of the files I received were on disks with damaged ProDOS directories. Although the AppleWorks files were intact on those disks, ProDOS could not read the files and RepairWorks could not recover these data. I used Bag of Tricks 2 and Mr. Fixit to recover many of those files. *[Ed: For more information, see the sidebar entitled "Problems with Damaged Data Disks" .]*

Some of the data base files I received were empty. Of course, RepairWorks could not reconstruct the data in the empty files.

Once I eliminated the damaged disks and empty files, I had 14 unreadable AppleWorks data base files. RepairWorks recovered all these files. RepairWorks could not read the data in some entries in the most heavily damaged files; the program substituted the words "missing data" in the record to keep the number of categories constant from record to record.

I also used RepairWorks to recover eight word processor files submitted by NAUG members and two files sent to me by the program's author. RepairWorks recovered all of those files.

Problems with Damaged Data Disks

You can usually tell if you have a damaged disk by asking AppleWorks to display a list of the files on the disk. If you get an error message instead of the list of files, or if AppleWorks cannot read two or more files on the disk, you probably have a damaged disk directory. Damaged disk directories are often caused by bugs in the early version of ProDOS that comes on AppleWorks 2.0 and earlier. The article entitled "How to Install the New Version of ProDOS" in the January 1988 issue of the *AppleWorks Forum* presents step-by-step directions on how to update to the latest version of ProDOS.

There are numerous programs that let you recover damaged disks. I like "Bag of Tricks 2" (from Quality Software) and "Mr. Fixit" on the ProSel disk. See the January 1987 issue of the *AppleWorks Forum* for step-by-step directions on how to use Bag of Tricks 2 to recover damaged AppleWorks data disks.

Limitations

Users must be realistic in their expectations about RepairWorks' ability to recover damaged files. The program cannot recover all damaged files. For example, RepairWorks does not claim to be able to recover damaged spreadsheet files. Nor can RepairWorks recover files on damaged disks or files with damaged pointers. In addition, the program cannot recover segmented files.

RepairWorks' inability to recover segmented files is a significant limitation for those of us with Applied Engineering and Checkmate Technology memory cards. Software that comes with these cards automatically segments files that are too large to fit on a single disk. These are usually important files; the current version of RepairWorks cannot recover these files.

Documentation and Support

My early version of RepairWorks came with four pages of preliminary documentation that helped me get started with the program but did not explain many of the program's features. I learned the program by experimenting and talking with the techni-

How to Load ASCII Files into AppleWorks

Some of the power of AppleWorks comes from its ability to read and write files stored in different formats on a data disk. AppleWorks can read AppleWorks, ASCII, DIF, Quickfile, and Visicalc files. The program can write AppleWorks, ASCII, and DIF files on a data disk.

[Ed: For more information about AppleWorks' ability to read and write different format files, see the sidebar entitled "How AppleWorks Stores Your Data" in the January 1988 issue of the AppleWorks Forum.]

ASCII files are useful because they serve as an industry standard. You can use ASCII files to transfer data between programs and between AppleWorks modules. For example, you can prepare an ASCII file with Bank Street Writer and use that ASCII file to create a new AppleWorks word processor file. *[Ed: See the letter entitled "How to Transfer Bank Street Writer Files into AppleWorks" in the March 1988 issue of the AppleWorks Forum.]*

Here are the steps to follow when you want to transfer an ASCII file into AppleWorks:

Word Processor Files

1. With the Main Menu on the screen, select choice #1, "Add files to the desktop".
2. With the Add Files Menu on the screen, select choice #3, "Make a new file for the word processor".

3. With the Word Processor Menu on the screen, select choice #2, "From an ASCII (text) file".
4. Enter the pathname to that file. The pathname consists of a slash, the name of the disk containing the file, another slash, the name of the subdirectory (if any) containing the file, followed by another slash and the name of the file. For example, if the file "NEW.INFO" is in a subdirectory called "DB" on the disk called "DATA", the pathname to that file is "/DATA/DB/NEW.INFO". *[Ed: For more information about pathnames, see the article entitled "What AppleWorks Users Should Know about ProDOS Pathnames" in the AppleWorks Handbook: Volume One.]*
5. Enter an AppleWorks file name for the document.
6. Issue an Apple-S command to save an AppleWorks-format copy of the file on your disk.

Data Base Files

While you can load any ASCII file into the AppleWorks word processor, you can only use certain ASCII files to create a new AppleWorks data base. The data in the file must consist of a series of lines separated by Returns. The first line must contain data for the first category in the first record. The second line must contain data for the second cate-

gory, and so forth. If you load this file into the AppleWorks word processor, the word processor document looks like this:

Bruce
Shanker
1279 Boyd Road
Warminster
Pennsylvania
18974-2260
Jay
Honigstock
3300 Singletree Road
Beaverton
Oregon
97820

The procedures necessary to use this file to create a new AppleWorks data base are identical to those described above for the word processor, with one exception: You must tell AppleWorks the number of categories in each data base record. If you know the number of categories in each record, enter that number in response to the "How many categories in each record?" prompt. If you do not know the answer, load the ASCII file into the AppleWorks word processor and count the number of categories in each record. Then delete the word processor file from the desktop, return to the Main Menu, and repeat the steps necessary to create the new data base file.

—James Smith

Software Review...

cal support staff at Quality Computers. Quality Computers indicates that complete documentation will be available by late April; they will charge \$5 to early purchasers who want the manual.

Quality Computers provides free telephone support for RepairWorks, although users must pay long distance charges associated with the call. They answered my call promptly. The technical representative said he was just getting comfortable with the program, but he was able to answer my questions about using the program with hard disk systems and subdirectories on 3.5-inch disks. He also explained the limitations of the program when I described a problem on a disk with a damaged directory. I left the telephone confident that users will get good support for this product.

Many RepairWorks operations use text files, so the program is easier to use if you enhance your copy of AppleWorks with the Text Loader Patch on the Late Nite Patches disk from JEM software. The Text Loader Patch modifies AppleWorks so it displays a list of the text files on your disk and lets you select the appropriate file from a menu. Once you install this patch, you no longer need to remember the pathnames to a text file; a list of all files automatically appears on your screen.

Conclusions

RepairWorks is a reliable, easy-to-use tool that recovers many damaged AppleWorks files. The program is now an important part of my AppleWorks file and disk recovery library. I recommend RepairWorks for all AppleWorks users who value the integrity of their data.

[Bruce Shanker is a mathematics teacher at Kensington High School in Philadelphia, Pennsylvania. Bruce is one of NAUG's "Beagle Buddies".]

Product Listing

RepairWorks (\$39.95)
Quality Computers
15102 Charlevoix
Grosse Point, MI 48230
(800) 443-6697
Support: (313) 331-1115

Bag of Tricks 2 (\$30)
Quality Software
from mail order dealers.

Late Nite Patches (\$20)
JEM Software
Box 20920
El Cajon, CA 92021

ProSel (\$40)
Glen Bredon
521 State Road
Princeton, NJ 08540

Spreadsheet Tip

How to Speed Up Large AppleWorks Spreadsheets

by Cathleen Merritt

If you do any serious work with the AppleWorks spreadsheet module, you know that the program is relatively slow as it plods through a large template. It gets tiresome to wait while AppleWorks recalculates the spreadsheet each time you enter a value or issue an Apple-K command.

Here are some ideas to help speed up your work:

1. Use version 2.1 of AppleWorks. The spreadsheet module in AppleWorks 2.1 only recalculates cells that are affected by data you entered into your model. Earlier versions of AppleWorks recalculate every cell, whether or not it is affected by the data you enter into the model. As a result, AppleWorks 2.1's spreadsheet module handles computation-intensive worksheets more efficiently than earlier versions of AppleWorks.
2. Follow these steps to configure your template so it only recalculates when you enter a Calculate Command (Apple-K):
 - A. Issue an Apple-V command to change the Standard Values in the spreadsheet.
 - B. Select "Recalculation" from the Standards Menu.
 - C. Select "Frequency" from the Recalculate Menu.
 - D. Select "Manual" from the Frequency Menu.
3. If you do a lot of spreadsheet work, consider upgrading your hardware to enhance the speed of your system. The review of the RocketChip in this issue of the *AppleWorks Forum* contains charts which illustrate the effect of different speed-up products on the spreadsheet module.

How to Select a Hard Disk Drive

by Gary R. Morrison

This is the second in a series of articles that describe how to use a hard disk drive with AppleWorks. Last month Dr. Morrison described the benefits of using a hard disk drive. This month he outlines the differences between hard disk systems and offers a checklist to help you choose a hard disk for your computer.

Your decision to purchase a hard disk drive system launches you on a path that offers many choices. This month, I will describe the differences between various hard disk systems and suggest the features to consider when you make this expensive purchase. By the time you are done with this article, you should have the information you need to make an intelligent decision between competing hard disk systems for your Apple.

Storage Capacity: A Major Consideration

Once you decide to buy a hard disk drive system, you must determine the storage capacity of the drive you will purchase. In general, the more you pay, the greater the storage capacity of the drive, but the less it costs per megabyte of space. For example, a CMS 20 megabyte unit costs approximately \$650 from discount vendors; the corresponding 40 megabyte system costs \$850, the 60 megabyte CMS drive costs \$950. Thus, the 20 megabyte drive costs \$32.50 per megabyte of storage, the 30 megabyte drive costs \$21.25 per megabyte, and the 60 megabyte drive costs \$15.83 per megabyte.

The ProDOS operating system can only access up to 32 megabytes on one drive. But don't think you must limit yourself to the smaller disk drive systems; disk drive manufacturers give you a way to electronically partition their larger drives into separate "volumes". This tricks your Apple into thinking that you have two disk drives, each of which is 32 megabytes or smaller in capacity.

ProDOS also sets a limit on the number of volumes you can manage, but those limits are quite liberal. Plug the hard disk drive interface card into slot 5 in your Apple, and ProDOS will recognize up to four volumes. If you plug the interface card into slot 1, 2, 4, 6, or 7, ProDOS will recognize up to two 32 megabyte volumes.

The size of the hard drive you should purchase depends on your budget, how you use your computer, and your personality.

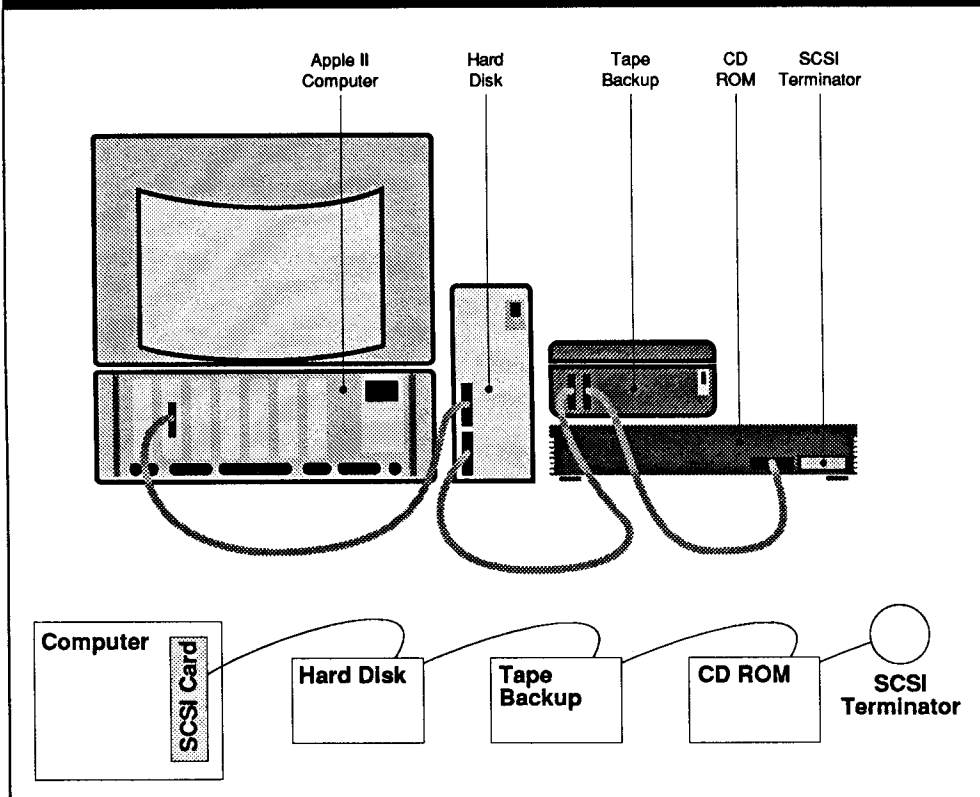
While you probably find it difficult to imagine ever needing that much storage, the new GS/OS operating system for the Apple IIGS is even more flexible than ProDOS. If you use an Apple SCSI-compatible hard disk and install an Apple SCSI Revision "C" card in slot 5 of the IIGS, you can have up to seven devices connected to that

card. Thus, GS/OS lets you divide a large hard disk into seven smaller volumes, each with a capacity of 32 megabytes. Alternatively, you can have fewer than seven volumes on the disk and connect a tape backup unit and a CD ROM device to the same interface card. If you have an Apple IIGS and plan to expand your system in the future, you should consider purchasing an Apple SCSI-compatible hard disk drive. I will discuss SCSI interface cards later in this article.

How Much Storage Should You Buy?

The size of the hard disk drive you should purchase depends on your budget, how you use your com-

Figure 1: Daisy-Chained SCSI Devices



Determining your future needs is a more difficult process. Remember that you cannot expand a hard disk drive; if you run out of space, you will have to add an additional drive to your computer. Also remember that you will probably need more disk space than you anticipate. For example, the AppleWorks GS program alone requires approximately 1.5 megabytes of disk space.

Here is a starting point: If you plan to store only programs on your hard disk, you will probably find a 20 megabyte drive adequate. If you want to store both programs and data, get at least a 40 megabyte system.

puter, and on your personality. There are two philosophies about what you should store on a hard disk. Some users take full advantage of their hardware; they store all their programs and data on the same drive. They enjoy the speed and convenience of the hard disk, but they risk losing any data files they did not back up onto floppy disks if their hard disk system fails. (I will discuss backup procedures in a future article).

More conservative users store programs on the hard disk but maintain their data files on one or more floppy disks. These users can sleep well knowing that they have floppy disk copies of all their program and data files. However, these users must change floppy disks while they work and do not enjoy all the speed and convenience of their hard disk system.

Users who store both programs and data on their hard disks need more storage capacity than those who store only programs on their system. In either case, you can estimate your current needs by adding up the size of all the program and data files you want to store on the hard disk system.

How Hard Disk Systems Communicate

A few years ago, the major hardware manufacturers agreed upon a standard way to connect a computer with storage devices like hard disks. The standard, called the Small Computer Standard Interface (SCSI, pronounced "Scuzzy"), specifies how a computer and disk drive system communicate. All popular hard disk systems for the Apple II claim to adhere to this SCSI standard; they all use a SCSI interface card you must install in your computer.

Theoretically, the SCSI interface offers users three benefits: First, SCSI-compatible peripheral units can be "daisy chained" together (see *Figure 1*); you do not need a separate interface card for every SCSI peripheral you purchase. Second, you should be able to mix any set of SCSI-compatible products in the same daisy chain. Finally, you should be able to use any SCSI-compatible product with any SCSI interface card.

Unfortunately, computer manufacturers developed different ways to implement the SCSI standard. As a result, there are now different SCSI standards,

Questions to Ask Your Dealer

Here are some questions to ask your dealer before purchasing a disk drive system:

1. Can you repair the disk drive and interface card or do you return them to the factory?
2. What do you do if the disk drive is defective upon delivery or fails within the first 30 days? (Do you replace the drive or do I have to wait while it is repaired?)
3. Do you offer an extended warranty program for the drive? How much does it cost?
4. What support do you offer if the disk drive is out for repair? Do you provide a loaner? (Most dealers do not, but you will find it difficult to use your system without a hard disk drive once you get used to the speed and convenience of that system.)
5. Will you install the interface card and test the hard disk drive on my computer?
6. Will you partition the disk drive, configure the disk for my system, and install my software on the drive? (Note: Expect to pay extra for this service, but it is a worthwhile expense for many new users.)

and you must be certain that all the SCSI peripherals you buy correspond to the same standard. For example, if you buy a disk drive system that conforms to the "Apple SCSI standard", you can connect that drive to any Apple computer (including a Macintosh). However, you cannot connect that drive to the SCSI cards sold by some other manufacturers. Nor can you mix Apple SCSI and non-Apple SCSI devices on a single daisy chain.

The table in *Figure 2* indicates which manufacturers fully conform to the Apple SCSI standard. You can mix devices from different vendors who conform to that standard. You cannot mix Apple SCSI-compatible devices with those from vendors who partially conform to the Apple standard.

In summary, if you buy an Apple SCSI interface card and Apple SCSI devices, you get all the bene-

fits of the SCSI interface. If you purchase a non-Apple SCSI interface card, you will be limited in the peripherals you can add to your system.

Speed of Operation

Hard disk systems differ in the speed with which they can store or access data on the disk. Access speed is measured in milliseconds and represents the average length of time it takes to move the head for typical read/write operations. The lower the access speed, the faster the disk drive. For example, a disk drive with an average access speed of 25 milliseconds will find data and programs on the drive about twice as fast as a disk drive with an access speed of 65 milliseconds. In general, the larger and more expensive the disk drive, the faster the access speed. *Figure 2* lists the average access speed for the most popular Apple II-compatible hard disk drives. Remember that even the slowest hard disk drive is many times faster than a floppy disk system.

In addition, AppleWorks is not a disk-intensive program; you will rarely notice the difference between the operating speeds of the various hard disk systems. The differences are more noticeable when you use a spell checking program because spell checkers make heavy use of a disk drive when they check the words stored on the electronic dictionary. Programs like AppleWorks GS are even more disk intensive; some disk drives will load AppleWorks GS noticeably faster than other drives. If you plan to run AppleWorks GS, consider a larger, faster, hard disk drive system.

Other Concerns

When all else is equal, there are other things to consider when you purchase a hard disk drive. If you have limited desk space, you should consider the physical size of the disk drive system. Some systems take up more desk space than others. The dimensions of each system appear in *Figure 2*.

Some disk drives require you to power up the hard disk and allow it to reach speed before turning on your computer. Other systems let you turn on both the computer and hard disk at the same time. This is more convenient for those of us who like to use the on/off switch on a power strip to control the power to our computers.

Figure 2: Hard Disk Drive Systems Compared

	Rated Capacity	Physical Dimensions (inches)	Access Time	Drive Boots with Computer	Head Parking	Factory Formatted	ProDOS Installed	Program Selector	Interface Card	Apple SCSI Compatible	MTBF (Hours)	Price
Apple Computer												
HD20SC	20Mb	10 1/2 x 9 7/10 x 3 7/10	85ms		Software			None	Extra	✓	30,000	\$899 ¹
HD40SC	40Mb	10 1/2 x 9 7/10 x 3 7/10	30ms		Software			None	Extra	✓	30,000	\$1,299 ¹
HD80SC	80Mb	10 1/2 x 9 7/10 x 3 7/10	30ms		Software			None	Extra	✓	30,000	\$1,799 ¹
Chinook Technology												
CT-20	20Mb	8 5/8 x 3 x 7	68ms	✓	Automatic	✓	✓	EasyDrive	Extra	✓	20,000	\$699 ¹
CT-20c ²	20Mb	8 5/8 x 3 x 7	68ms	✓	Automatic	✓	✓	EasyDrive	Not required	n/a	30,000	\$769 ¹
CT-30	30Mb	8 5/8 x 3 x 7	38ms	✓	Automatic	✓	✓	EasyDrive	Extra	✓	30,000	\$799 ¹
CT-40	40Mb	8 5/8 x 3 x 7	28ms	✓	Automatic	✓	✓	EasyDrive	Extra	✓	30,000	\$899 ¹
CMS Enhancements												
SD20	20Mb	10 1/4 x 9 3/4 x 3 3/4	65ms	✓	Software	✓	✓	Desktop II	Included		20,000	\$895
SD30	30Mb	10 1/4 x 9 3/4 x 3 3/4	40ms	✓	Software	✓	✓	Desktop II	Included		20,000	\$995
SD60	60Mb	10 1/4 x 9 3/4 x 3 3/4	40ms	✓	Software	✓	✓	Desktop II	Included		20,000	\$1,295
First Class Peripherals (Sider)												
D2 ¹	20Mb	16 x 3 3/4 x 7 1/2	65ms	✓	Software	✓		Sider Shell Menu	Included		20,000	\$595
D4/A	40Mb	16 x 3 3/4 x 7 1/2	61ms	✓	Software	✓	✓	ProSel	Included		20,000	\$795
D4/Turbo	40Mb	16 x 3 3/4 x 7 1/2	25ms	✓	Automatic	✓	✓	ProSel	Included		30,000	\$995
D7/T	70Mb	16 x 3 3/4 x 7 1/2	29ms	✓	Automatic	✓	✓	ProSel	Included	partial ⁴	40,000	\$1,299
D9	90Mb	16 x 3 3/4 x 7 1/2	18ms	✓	Automatic	✓	✓	ProSel	Included	partial ⁴	40,000	\$1,695
C96	90Mb	16 x 4 7/10 x 7 1/2	18ms	✓	Automatic	✓	✓	ProSel	Included	partial ⁴	40,000	\$2,495 ⁵

Definitions and Notes

- Physical Dimensions: Listed in the order Depth, Width, and Height.
- "Drive Boots with Computer": When first powered up, all hard disks require a moment to reach full speed. A checkmark indicates that the drive's interface card pauses the reboot cycle of the Apple II until the hard disk drive is ready. This prevents unnecessary "Check disk drive" messages.
- MTBF (Mean Time Between Failures): The number of hours a hard disk manufacturer expects the device to function before mechanical factors contribute to an error.
- ¹ Requires purchase of the Apple SCSI card; \$129 extra.
- ² The CT-20c is the only hard disk drive that is compatible with the Apple IIc and IIc Plus. It is not suitable for IIe and IIgs systems.
- ³ Supports multiple operating systems: DOS 3.3, Pascal, CP/M, ProDOS 8, ProDOS 16, and GS/OS.
- ⁴ The drive works with the Apple SCSI Card, but the interface card supplied with the drive will not support Apple-brand hard disks, or SCSI drives designed for the Macintosh.
- ⁵ Includes an internal 60Mb tape backup unit.

Hard Disk Primer...

While you are looking at disk drives, you might want to listen to the disk and determine how much noise it makes. Disk drives run continuously and the hum of the drive is annoying to some users. Noise can come from the internal motor that runs continuously or during disk access when you load or save a file. For example, my CMS disk has a very noisy front cover which I find distracting. Stuffing some rubber o-rings around the cover cor-

Other Hard Disk Drive Systems

While only four manufacturers cater to the Apple II hard disk market, the Apple II owner has more hard disk alternatives than first seems apparent. The key to this flexibility is the Apple SCSI Interface Card that lets you use any Apple SCSI-compatible disk drive with an Apple II computer.

Most hard disk drives designed for the Macintosh computer are compatible with the Apple SCSI interface card, and Macintosh hard disks are significantly less expensive than comparable products designed specifically for the Apple II market. However, you must buy an Apple Computer SCSI Interface Card (\$129) and you should expect some inconveniences if you choose to use a Macintosh hard disk system with your Apple II.

For example, these drives are pre-formatted for a Macintosh; you must re-format any Macintosh drive you want to use with ProDOS or GS/OS. If you buy a large hard disk, you will have to find a way to partition the disk into the smaller volumes that ProDOS can manage. In addition, you will have to provide your own Apple II utility software and program selectors for these systems. These items are available; consider ProSel (\$40 from Glen E. Bredon, 521 State Road, Princeton, New Jersey 08540 (609) 924-5976) or EasyDrive (\$39.95 from Quality Computers (800) 443-6697).

Experienced computer users should find the Macintosh disk drive market an attractive alternative to the four brands of disks listed in *Figure 2*. Less experienced computer users will find it easier to get started if they purchase a drive listed in this table.

rected this problem. [Ed: NAUG has one CMS, one Sider, and two Chinook drives. We find the Chinook drives somewhat quieter than the CMS and Sider, but none are particularly distracting in our setting.]

Another consideration for purchasers is the portability of the disk system. Some users want to transport the disk drive between their home and office. This is not a recommended practice, since there are some delicate parts inside the disk drive unit. All manufacturers provide a way to "park" the read/write heads in an area that does not contain data. (You should always park the heads before moving your disk drive.) Some systems park the heads automatically after a period of inactivity; others force you to park the heads manually by running a utility program that comes with the disk drive. The table in *Figure 2* indicates whether the disk drive manufacturer provides automatic disk head parking.

Manufacturers of Apple II drives try to make it easy to install their systems and use their products. All but the Apple-brand disk drives come formatted from the vendor, and most also come ready to boot. You can install the interface card in the appropriate slot and boot your system from the new hard disk. (I will describe how to install and configure a hard disk in the next article in this series.)

Finally, you will want to consider the disk management software that comes with the drive. Most modern disk drives come with program selectors such as ProSel or EasyDrive, and every user has his or her favorite. You can use any of the utilities with any drive, but you are likely to use what comes with your system. The program selector you use will determine how easy it is for you to switch between programs and manage your hard disk. Advanced users often like ProSel, but I am partial to EasyDrive (perhaps that is because I wrote the EasyDrive manual).

How to Select a Dealer

Deciding where to buy your hard disk is probably the single most important factor in making your purchase decision. You cannot assume that a local dealer is prepared to support and service the hard disk you want. Some dealers are familiar with hard

disk systems; others provide only minimal service.

If you are an experienced computer user, are comfortable with your hardware and software, and can manage the frustrations and delays that sometimes accompany mail order purchases, you can save money by purchasing from a mail order dealer. Unfortunately, you will pay a considerable premium for the support and service of a local dealer.

As with most major computer purchases, try to pay with a major credit card instead of with a check or cash. Some hard disk drives are defective when delivered. If you pay with a credit card, you have certain rights if the disk drive is defective. Purchase by check or with cash and you will have to negotiate with your vendor.

Whether you buy from a local dealer or a mail order vendor, consider the questions that appear in the sidebar entitled "Questions to Ask Your Dealer?" on the previous page.

Summary

The growing popularity of hard disks for the Apple II series makes it possible to locate a hard disk that should fit your specific needs. In this article, I identified a number of factors you should consider when you purchase your disk. Next month, I will describe how to install and configure your new hard disk drive system.

[Dr. Gary R. Morrison is an Associate Professor at Memphis State University. He is the author of the book "ProDOS 8 and 16", RepairWorks, and numerous other articles and software.]

Hard Disk Manufacturers

Apple Computer
20525 Mariani Ave.
Cupertino, CA 95014
(408) 996-1010

Chinook Technology
601 Main St. #635
Longmont, CO 80501
(303) 678-5007

CMS Enhancements, Inc.
1372 Valencia Ave.
Tustin, CA 92680
(714) 259-9555

First Class Peripherals
3579 Highway 50E
Carson City, NV 89701
(800) 982-3232

A Few Words about Sider Drives

It is tempting to examine the data in *Figure 2*, assume the disk drives are all of comparable quality, and select the least expensive of the systems: the 20 and 40 megabyte Sider drives from First Class Peripherals. However, you should be aware that a number of NAUG members are unhappy with their Sider drives.

To learn more about these drives, we contacted a large dealer who sells Chinook, CMS, and Sider drives to get his recommendations. In addition, we talked with Bill Husseman, V.P. of Quality Control and Darrell Echols, Marketing Director for First Class Peripherals.

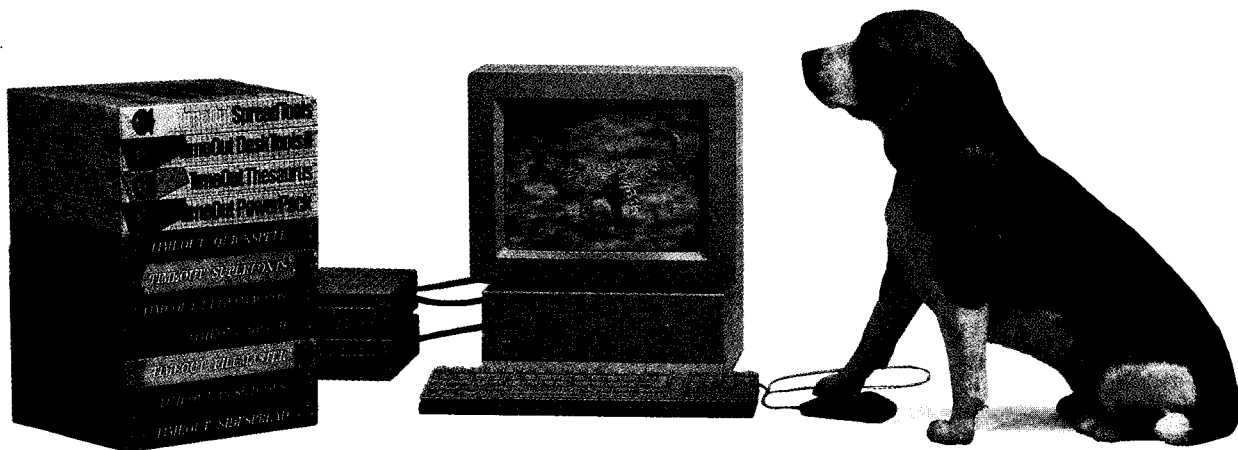
All three parties report that the Sider C2 and D4/A drives use an older technology than the other systems listed in *Figure 2*. (These drives use 5.25-inch platters; all other drives on the list use 3.5-inch platters.) The dealer reports significantly more failures with the Sider C2 and D4/A drives than with the Chinook and CMS drives. In addition, the 5.25-inch platters in the Sider D2 and D4/A drives make them noisier than the other drives on the list. Finally, the dealer reports that the Sider D2 and D4/A drives are not fully GS/OS-compatible. (First Class Peripherals is about to release a GS/OS driver for these drives. The GS/OS software enhancement will cost \$40 direct from the company. Identify yourself as a NAUG member; the regular price for this software is \$60. This software will not be included with the 20 and 40 megabyte Sider drives.)

First Class Peripherals reports they recently instituted a number of policies to increase the reliability of their drives. They now test *every* disk drive they purchase from suppliers and test both the individual components and the complete systems they ship to customers.

The Sider D2 and D4/A drives are less expensive than the more modern units, and many Sider owners are happy with their systems. But purchasers should recognize the differences in the technology used in these drives when compared to the other systems on the list.

—Cathleen Merritt

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How to Control AppleWorks with Macros that Read the Screen

by Mark Munz

In this eighth article of the Macro Primer series, Mr. Munz describes a series of UltraMacros commands that let you read the AppleWorks screen. He describes how to use these commands to make your macros more flexible and powerful. The author assumes you know the concepts covered in the earlier articles in this series.

Last month, I described how to write macros that “branch” depending on your response to messages displayed on the screen. This month, I will describe commands that let you obtain information from AppleWorks. By the end of this article, you will be able to capture information displayed on the AppleWorks screen and use that data in your macros.

UltraMacros offers several powerful commands that let you capture data from the AppleWorks display; this article describes three of them: The <screen> command reads the AppleWorks display and lets your macro branch depending on what is on the screen. The <cell> command captures the contents of any entry in a data base file or the contents of any cell in a spreadsheet. The <find> command tells UltraMacros to highlight the menu item or file you specify in AppleWorks listings.

The <screen> Command

Some AppleWorks commands work consistently throughout the AppleWorks modules. For example, when you type an Apple-Q, AppleWorks always presents the Desktop Index.

However, AppleWorks sometimes varies its response to your commands. For example, consider the Apple-R command in the data base module. When you issue an Apple-R command, AppleWorks checks if a previous set of record selection rules are active. If record selection rules are in effect, AppleWorks asks if you want to “Select all records?”. If no record selection rules are in effect, AppleWorks lets you specify the selection criteria.

This presents a problem when you write a macro. The macro must respond one way if record selection rules are already in effect, and respond a different way if rules are not in effect.

The <screen> command can read the AppleWorks prompts on the screen and lets you write macros that branch depending on the contents of the display. In our example, you can use the <screen> command to check the bottom line of the screen and see whether or not it contains the prompt “Select all records?”

The <screen> command is similar in structure to the <getstr> command I described last month. If you want to let the user enter a five-character string, you use the command “\$1 = getstr 5”. If you want to read five characters from the beginning of the third line on the screen, you use the command “\$1 = screen 1,3,5”.

The <screen> command requires three numbers to indicate where to start reading the screen and the number of characters to read from the screen. The AppleWorks screen consists of 24 lines of 80 columns each. The <screen> command requires that you specify the column you want to read, then the line, then the number of characters you want to read. <screen 1,3,5> says “Go to the first character in the third line down from the top of the screen. Read in five characters starting from that position.”

A Sample Macro Using <screen>

Figure 1 contains two macros that demonstrate how to use the <screen> command. You invoke these

Figure 1: Auto-Print Macros

```
start
P:<asp:oa-P>A<rtn:
  $0=screen 1,24,4:
  if $0="Type" then oa-Y:date:rtn:elseoff:
  rtn>!
P:<adb:$0=screen 43,1,6 :
  if $0="CHANGE" then oa-P:rtn>1<rtn:elseoff:
  oa-P:rtn:
  $0=screen 1,24,4:
  if $0="Type" then oa-Y:date:rtn:elseoff:
  rtn>!
```

macros when you want to print either a data base report or a spreadsheet. The macros check to determine if you will print a report header at the top of the page. If you want to print a header, the macros automatically enter the correct date in response to the "Type report date or press Return" prompt. If you do not want to print a header, the macros skip over this step and start the printing process. Since you defined the first macro as an "asp" (AppleWorks spreadsheet) macro and the second macro as an "adb" (AppleWorks data base) macro, UltraMacros runs the appropriate one when you type Solid-Apple-P.

The Spreadsheet Macro

The first line in the spreadsheet macro (P:<asp:oa-P>A<rtn) issues an Open-Apple-P command, responds "All" to AppleWorks' "Print? All Rows Columns Block" prompt, and then enters a Return to select your current printer.

The second line in the macro (\$0=screen 1,24,4) tells UltraMacros to capture the text in the first four columns at the bottom of the screen and store that text in location \$0 ("String Zero"). If you want to print report headers, the screen displays "Type report date or press Return:" on the bottom line and UltraMacros captures the string "Type". If you do not want to print headers, AppleWorks displays "How many copies?" at the bottom of the screen and \$0 will contain the string "How".

The third line in the macro (if \$0="Type" then oa-Y:date:rtn:elseoff) tells UltraMacros to check to see if location \$0 contains the string "Type". If \$0 contains "Type", UltraMacros issues an Apple-Y command to yank out the previous entry. The <date> command followed by <rtn> then enters the current date. "Else-off" terminates all <if> commands.

The last line in the spreadsheet macro enters a Return in response to the "How many copies?" prompt to accept the default value of one copy.

The Data Base Macro

The data base macro is more complex than the spreadsheet macro because the AppleWorks data base module uses the Apple-P command in two different ways. If you issue an Apple-P command in Review/Add/Change mode, AppleWorks takes you to the Report Menu screen. If you issue an Apple-P when you are defining a report, AppleWorks starts the report printing sequence.

The first line in this macro (\$0 = screen 43,1,6) captures part of the text from the top of the AppleWorks screen and stores that text in location \$0. If you are in Review/Add/Change mode, location \$0 will now contain the string "CHANGE".

The second line in the macro (if \$0="CHANGE" then oa-P:rtn>1<rtn:elseoff) checks to see if \$0 contains the string "CHANGE". If \$0 contains "CHANGE", the macro issues an Apple-P command to take you to the Report Menu, a Return to indicate you want to use an existing report format, the number "1" to highlight the first report format, and a Return to select that report format. If \$0 does not contain the string "CHANGE", UltraMacros skips to the "else-off" and does not execute the Apple-P, Return, "1", or Return Key entries.

The next line (oa-P:rtn) tells UltraMacros to issue an Apple-P command and to issue a Return to select the highlighted printer from the Printer Menu.

The next three lines (\$0=screen 1,24,4 : if \$0="Type" then oa-Y:date:rtn:elseoff : rtn>!) are identical to the corresponding lines in the spreadsheet macro. They tell UltraMacros to enter the date if AppleWorks displays the string "Type" at bottom of the screen and then accept the default entry specifying the printing of only one copy.

These macros demonstrate how you can use the <screen> command to help UltraMacros determine the appropriate response for different situations within AppleWorks.

A Macro that Rearranges Data Base Entries

Figure 2: Sample <cell> Macro to Shift Entries

```

start
s:<adb :
  down : down : down : down : down :      {Move highlight to Prior Date2 category}
  down : down : down : down : down :
  $1 = cell : down : $2 = cell :             {Read Prior Date2 into $1; read Note 2 into $2}
  down :                                     {Move cursor to Prior Date3 category}
  oa-y : print $1 : rtn :                   {Replace original data with date from Prior Date2}
  oa-y : print $2 : rtn :                   {Replace Note3 with data from Note2}
  up : up : up : up : up : up :             {Move highlight to Prior Date1 category}
  $1 = cell : down : $2 = cell :             {Read Prior Date1 into $1; read Note 1 into $2}
  down :                                     {Move cursor to Prior Date2 category}
  oa-y : print $1 : rtn :                   {Replace original data with date from Prior Date1}
  oa-y : print $2 : rtn :                   {Replace Note2 with data from Note1 category}
  up : up : up : up : up : up :             {Move highlight to Date/This Cntct category}
  $1 = cell : down : $2 = cell :             {Read Date/This Cntct into $1; Read Note into $2}
  down :                                     {Move cursor to Prior Date1 category}
  oa-y : print $1 : rtn :                   {Replace original data with date from Date/This Cntct}
  oa-y : print $2 : rtn :                   {Replace Note1 with data from Note category}
  up : up : up : up : up : up :             {Move cursor to Date/This Cntct category}
  oa-y : date2 : rtn :                     {Delete old date and replace with current date}
  oa-y : !                                {Delete previous data in Note category}
  
```

Shift data for
second-to-last
contact to last contact

Shift data for
second contact
to second-to-last contact

Shift data for
first contact
to second row

Enter date; place
highlight so user may
enter notation

Figure 3a: Data Base File for Use with Sample Macro

File: Sales Activity REVIEW/ADD/CHANGE Escape: Main Menu
 Selection: All records

Record 19 of 364

Company: American Widget Company Contact Person: Henry S. Callier

Product: The Widget, Widget II, Widget XT, and Widget Jr.

Phone: (313) 555-1212 Fax: (313) 555-1299

Date/This Cntct: Mar 12 89	Note: Complimented last batch of rubber feet
Prior Date1: Feb 9 89	Note1: Complaint; last batch of feet don't stick
Prior Date2: Nov 23 88	Note2: Inquired re: qty discount for rubber feet
Prior Date3: Sep 1 88	Note3: Requested 500 rubber feet for Widget XTs

Comment1: -
 Comment2: -
 Comment3: -

Type entry or use * commands *-? for Help

Figure 3b: Data Base Record after Macro Execution

File: Sales Activity REVIEW/ADD/CHANGE Escape: Main Menu
 Selection: All records

Record 19 of 364

Company: American Widget Company Contact Person: Henry S. Callier

Product: The Widget, Widget II, Widget XT, and Widget Jr.

Phone: (313) 555-1212 Fax: (313) 555-1299

Date/Last Cntct: Apr 3 89	Note:
Prior Date1: Mar 12 89	Note1: Complimented new batch of rubber feet
Prior Date2: Feb 9 89	Note2: Complaint; last batch of feet don't stick
Prior Date3: Nov 23 88	Note3: Inquired re: qty discount for rubber feet

Comment1: -
 Comment2: -
 Comment3: -

Type entry or use * commands *-? for Help

The <cell> Command

Although the <screen> command will read any text on the screen, it is difficult to use <screen> to capture data that is in an AppleWorks file. For example, sometimes AppleWorks displays a specific spreadsheet cell at one location on the screen, at other times that cell appears at another location.

UltraMacros offers the <cell> command, which captures the contents of the currently highlighted spreadsheet cell, the contents of a single data base entry, or the contents of a line in the word proces-

sor. If you use the format "<cell>" in a macro, UltraMacros automatically stores the data in location \$0. You can also specify any storage location from \$0 through \$9 by using the format <\$2 = cell>.

Figure 2 presents an example of a macro using <cell>. An explanation of that macro follows:

Imagine that you keep a record of your contacts with clients. Every time you call on a client, you enter the date and purpose of the contact. Figure 3a depicts an example of the data you might store in this AppleWorks data base file. The most current

Macro Primer...

contact is at the top of the list. You also want to retain information about the three previous contacts, but not the earlier data.

The macro in *Figure 2* uses the <cell> command to capture the contents of each data base entry and move that entry into another location in the same data base record.

How the Macro Works

The objective is move the data from each date and note category into the next category, thus making room in the "This Cntct" and "Note" categories for information about your latest contact with the customer. The macro in *Figure 2* uses the <cell> command to capture the data in a category, then uses the <print> command to enter the data in the new location.

The first two lines in this macro consist of nine down arrow commands, which move the cursor to the tenth category, "Prior Date 2".

The next line (\$1 = cell : down : \$2 = cell) uses the <cell> command to copy the entry in the "Prior Date2" category into memory location \$1 and copies the entry in the "Note2" category into location \$2. The fourth line, down:, commands UltraMacros to move the cursor to the next category, "Prior Date3".

Line five (oa-y : print \$1 : rtn) deletes the original entry in "Prior Date3" and prints the contents of location \$1 into that category. Line six repeats that process; replacing the contents of Note3 with the text originally in Note2.

Line seven (up : up : up : up : up : up) moves the cursor up to the category "Prior Date1". Lines eight through 11 move the cursor to the appropriate categories, deletes the original entries, and prints the new entries in their place.

The macro repeats this process until it moves all entries to the following set of cells. The next to the last line (oa-y : date2) removes the original entry from the "This Cntct" category and uses the <date2> token to enter the current date in the standard AppleWorks chronological format. The final line of the

macro (rtn:oa-y!) moves the cursor to the "Note" category, yanks out the original note, and terminates the macro. The user can then enter a note for the most recent contact with the client.

The <cell> command has numerous applications. For example, you can use <cell> to copy a single data base entry into many records, into different data bases, or even into different AppleWorks modules. I will use this command again later in this series of articles.

The <find> Command

To review: The <screen> command lets UltraMacros capture text that always appears at a stationary location on the AppleWorks display; the <cell> command captures data from an AppleWorks file.

Figure 4: Using <find> to Load Templates

```
a:<all : oa-q : esc : {Go to the Main Menu }
rtn : rtn : { Add a File from the current disk }
$0 = "Letter Template" : find : rtn : {Select and load template }
oa-n>! { Let user change the file name }
```

Now imagine trying to write a macro that looks for a specific file on the Desktop Index, Disk Catalog, Report Menu, or Printer Menu. While the text you want to locate is on the screen, there is no easy way to use either the <screen> or <cell> commands to move the cursor to any specific item on the menu. UltraMacros offers the <find> command so you can select items from these AppleWorks menus.

The <find> command works differently from <screen> and <cell>. To use <find> you first store the string of text you want to find, then use <find> in your macro. You must store the text in location \$0.

For example, imagine that the file "Sales Totals" is one of three files loaded onto the AppleWorks desktop, and you want to move to that file. The line <oa-q : \$0 = "Sales Totals" : find : rtn> calls up the Desktop Index, moves the highlight to the file "Sales Totals", then sends a Return keypress to AppleWorks, making that file active. If you want to be certain that a macro always uses the ImageWriter when printing a word processor file, you can incorporate the commands, <oa-p : rtn : \$0 = "ImageWriter" : find : rtn>, to print the file on the ImageWriter.

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Another important use of <find> is to select a file from a catalog of files on an AppleWorks data disk. For example, if you use the file "Letter Template" with AppleWorks, you can use the <find> command to automate your use of that template. *Figure 4* lists a short macro that automatically loads the file "Letter Template" and lets you rename the document before entering text.

Conclusion

You now know three ways to use information presented on the AppleWorks screen. You can use the <screen> command in combination with the <if> command to control the flow of a macro. You can use the <cell> command to abstract data from AppleWorks data files. You can use the <find> command to navigate AppleWorks menus efficiently.

Next month I will describe the concept of "variables" and how to use string and numeric variables when writing macros.

[Mark Munz is the newest member of the professional staff at Beagle Bros, publishers of the TimeOut enhancements for AppleWorks.]

Tokens Discussed to Date in the Macro Primer Series

Tokens that Control Input and Output

- bell** <bell : bell>
Sound the AppleWorks error buzzer twice.
- cell** <\$2 = cell>
Read the contents of the current data base entry, spreadsheet cell, or word processor line into location \$2.
- date** <date>
Type the current date in the format "April 24, 1989".
<date2>
Type the current date in the format "4/24/89".
<\$3 = date>
Place the current date into location \$3.
- find** <oa-q: \$0 = "Sales.Jun" : find>
Move the highlight cursor to the file "Sales.Jun" in the Desktop Index.
- getstr** <\$4 = getstr 5>
Let the user enter up to five characters, and store the entry in location \$4.
- input** <input>
Let the user enter keystrokes in AppleWorks until pressing the Return Key.
- key** <key>
Pause macro execution until a key is pressed.
<\$1 = key>
Store the ASCII value of the next keypress into location \$1.
- msg** <msg 'Working'>
Displays the word "Working" in inverse at the bottom of the screen.
<msg "Busy">
Displays the word "Busy" in normal video at the bottom of the screen.
- print** <print \$1>
Send the contents of \$1 to the screen.
- screen** <\$3 = screen 1,20,5>
Read the five characters beginning at the first column of line 20 into location \$3.

Tokens that Control Program Flow

- elseoff** <if \$4 = "Forum" then bell : elseoff>
Signals the end of an <if> expression.
- goto** <goto ba-1>
Jump immediately to macro Both-Apples-1
- if** <if \$4 = "Forum" then bell>
Ring the AppleWorks buzzer if the contents of \$4 is the string "Forum".
- stop** <if \$4 = "Index" then stop>
If location \$4 holds the text "Index" then stop running the macro.

NAUG to Present AppleWorks Seminars at AppleFest

The National AppleWorks Users group will present two half-day AppleWorks seminars at AppleFest '89 in Boston. The presenter, Dr. Warren Williams, is a technical advisor to NAUG and a frequent contributor to the *AppleWorks Forum*. He has written more than 60 articles about AppleWorks and has conducted more than 75 AppleWorks seminars throughout the country.

The seminars, modeled after NAUG's popular "AppleWorks: Beyond the Basics" presentations, are scheduled for 1 p.m. to 5 p.m. on May 4, and 8 a.m. to Noon on May 6. For additional information, contact AppleFest at (800) 262-FEST.

First National NAUG Meeting on AppleLink

NAUG will host the first online, national conference of NAUG members on the AppleLink — Personal Edition telecommunications service. This conference is your opportunity to meet NAUG's officers, learn about future plans for the nation's largest Apple II computer organization, and offer your suggestions as NAUG prepares for the 1990s.

Oliver Roosevelt, AppleLink's AppleWorks Special Interest Forum leader, will host the conference from 9-10 p.m. Eastern Time, April 30, in the Pippin Auditorium on AppleLink.

Follow these steps to join the conference:

1. Select "Apple Community" from the AppleLink Main Menu.
2. Select "Calendar and Events" from the Apple Community Menu.
3. Select "Apple Community Auditoriums" from the Calendar and Events Menu.
4. Select "Enter Pippin" from the Apple Community Auditoriums Menu.

A+ and inCider Magazines Merge

The nation's two largest Apple II magazines, *A+* and *inCider*, will merge into a single publication beginning in June 1989. The new magazine, which does not yet have a name, will be published by the staff of *inCider*. Apple II owners who subscribe to both magazines will receive extensions to their subscriptions to compensate for the loss of their *A+* issues.

New Communication Utility for AppleWorks Users

CompuTask recently announced the release of MBE (Message Board Editor), an off-line communications utility that works with AppleWorks and most popular communications programs. MBE makes it easy to use the electronic mail and electronic forum areas on CompuServe. MBE costs \$25 from Dave Gair, 6531 Lexington Avenue, Los Angeles, California 90038-1451 or \$20 if you download the program from the MAUG area on Compuserve.

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Clariss Releases Free AppleWorks GS Update

by Cathleen Merritt

Clariss Corporation recently announced the release of version 1.0v2 of AppleWorks GS. Version 1.0v2 is an "update", not an "upgrade"; it includes numerous enhancements and fixes some problems with the first release of AppleWorks GS, but does not add new features to the program. Version 1.0v2 offers the following enhancements:

Faster ImageWriter printer driver: Clariss wrote a new ImageWriter printer driver to overcome some of the limitations of the GS/OS ImageWriter driver. The new driver is significantly faster than the original; users should see a 20%-40% increase in printing speed with the new version of AppleWorks GS.

Enhanced ability to import graphics: The original version of AppleWorks GS cropped some imported graphics so the full image did not appear in the AppleWorks GS file. Version 1.0v2 reliably imports graphics from a wider variety of Apple IIGS graphics programs. In addition, AppleWorks GS 1.0v2 retains the correct colors when it imports 640-mode APF graphics and screen dumps. Finally, while AppleWorks GS supports only 640-mode graphics, version 1.0v2 now simulates the colors of the original document when you import 320-mode graphics from other programs.

Enhanced "Match Records" Command: The AppleWorks GS data base Match Records Command Menu now offers "contains", "begins with", and "ends with" choices. This corresponds to some of the options available in the Record Selection Rules command in standard AppleWorks.

Mailing Label Template: Version 1.0v2 includes a data base template to help users prepare 1-inch mailing labels.

The new AppleWorks GS disks also include a useful stand-alone program that tests the memory chips in the Apple IIGS. This program identifies

defective chips and helps you locate the source of potential memory problems. The company reports that a significant number of AppleWorks GS problems are caused by one or more defective RAM chips in the computer, not by the program.

Clariss plans to release AppleWorks GS 1.0v2 by the end of April and will send a free copy to all registered AppleWorks GS owners. The package will include new System and Program Disks and 40 pages of documentation. Owners of AppleWorks GS should immediately return the registration card packed with the program; that is the only way you can register as an AppleWorks GS user.

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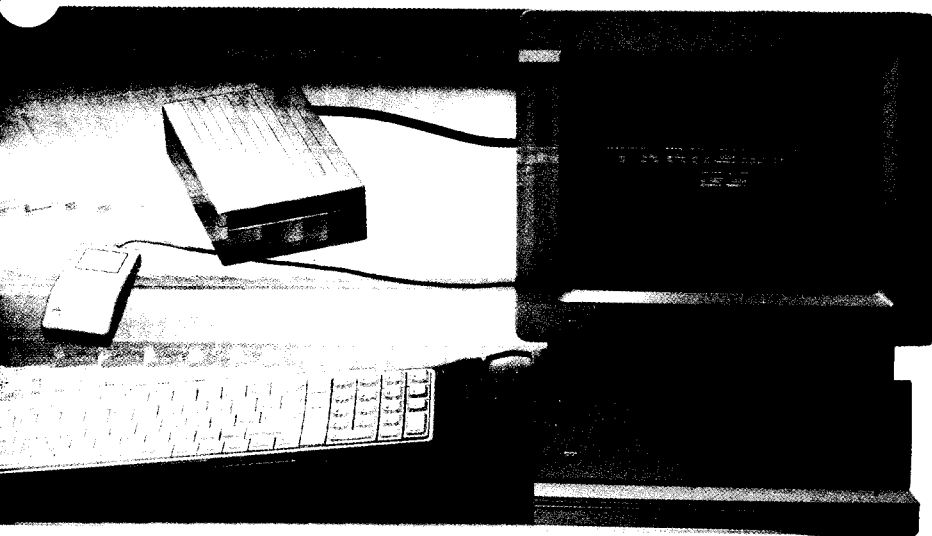
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How to Get Help with the Apple Utility Software

by William Marriott

Each month, the *AppleWorks Forum* lists the member-volunteers who offer technical support for AppleWorks products. This month's list identifies the volunteers who can answer questions about utility software for Apple computers. Next month's issue will contain a list of members who offer help with AppleWorks-compatible hardware and printers.

Utility Software

How to Use this List

To the left of each volunteer's name are numbers that indicate the utilities the consultant supports. Volunteers are listed alphabetically by state.

- 1 = ProDOS
- 2 = File Conversion
- 3 = Copy II+
- 4 = Disk/File Recovery
- 5 = Printrix/Fontrix
- 6 = FontWorks

		City	Work	Home
Alaska				
1,5	Ross Lambert	Unalakleet	907/ 624-3161	-
Alabama				
1	Rebecca Cathey	Eutaw	-	205/ 372-3581
Arizona				
6	Jeff Cox	Tucson	-	602/ 297-0308
California				
4	Michael Beebe	San Diego	619/ 224-8823	619/ 221-2363
3	Stephen Brewer	San Bernardino	-	714/ 882-3308
1,2,3,5,6	Robert Demmon	Coronado	-	619/ 435-0520
5	Don Farrar	Pleasant Hill	-	415/ 932-5509
3	George Gray	Los Angeles	-	213/ 774-4131
1,2,3,6	Terry Higgins	Hayward	415/ 887-7499	-
1,3,6	Berenice Maltby	Corona del Mar	714/ 640-7369	-
3,6	Tom Militello	Rancho Palos Verdes	-	213/ 541-2766
1,3	Will Nelken	San Rafael	415/ 456-1798	415/ 459-0845
Colorado				
3	Gary Armour	Littleton	-	303/ 933-9493
1,2,3	David Gillaspie	Lakewood	303/ 431-6100	303/ 988-0994
1	Lyle Graff	Littleton	303/ 977-4557	303/ 794-5970
3,5	Harry McMullen	Littleton	-	303/ 795-5510
1	Larry Thaete	Boulder	303/ 492-2717	303/ 939-9072

		City	Work	Home
Connecticut				
1,2	John R. Robinson	Niantic	203/ 739-7435	-
3,6	Emery Roth	Washington	-	203/ 868-7118
3,6	Newton Shaffer	Gales Ferry	-	203/ 464-9716
Florida				
1,3	John Andrianoff	Fl. Pierce	-	305/ 466-6653
5	H. Clay Bailey III	Jacksonville	904/ 725-3477	904/ 744-2499
1,3,	Thomas Stanius	Opa Locka	305/ 375-2095	305/ 624-6162
1,3	Jeff C. Strichard	Fl. Lauderdale	305/ 763-3883	305/ 587-9590
Georgia				
1,2,3	Jim Sulsona	Doraville	-	404/ 455-0853
Illinois				
3,6	Connie Peters	Decatur	217/ 875-2431	217/ 429-6242
3	Dennis Ricke	St. Charles	312/ 377-4829	-
6	Walter Schillinger	Oak Park	312/ 451-3000	312/ 386-2278
1,3,4	Bowen Schumacher	Winnetka	312/ 546-0633	312/ 501-3314
3	Victor Weisskopf	Lincolnwood	312/ 674-7400	-
Indiana				
3	Stanley Boler	Knightstown	-	317/ 345-5663
1	Brenda Crenshaw	Shelbyville	317/ 264-1286	317/ 398-0525
3	Irvin Haas	Carmel	-	317/ 848-0050
Kansas				
1,3	Dick Fogliasso	Girard	316/ 724-4590	316/ 724-4330
3	Jan Laughlin	Mapleton	316/ 743-3441	-
Kentucky				
1	Rosalie Lasee	Richmond	606/ 622-1986	-
Massachusetts				
1,3	Pamela Michaelson	Marblehead	617/ 631-0918	-
Maryland				
3,4	Ronald Romanowicz	Glencoe	301/ 472-4800	301/ 472-2983
1,2,3	Michael Spurrier	Baltimore	301/ 955-5938	301/ 298-0263
Michigan				
3,4	Jim Anker	Hazel Park	313/ 542-3910	313/ 391-0033
3	Joe Connelly	Livonia	313/ 421-8729	-
1,2,3	Arthur Daniel	Warren	313/ 445-7142	313/ 445-7105
1,2	Lynn Leininger	Monroe	-	313/ 241-4021
1,3,6	Bill Neef	Grass Lake	517/ 522-4689	-
3	Quality Computers	Grosse Pointe	313/ 331-0700	313/ 331-1115
1,3	Mike Robinson	Royal Oak	-	313/ 585-5027

Utility Software...

		City	Work	Home
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6	Brian Theil	Taylor	-	313/ 287-4608
5,7	Richard Zajac	Mt. Clemens	313/ 465-5040	313/ 465-2615
1,2,3,4	Keith Zook	Grosse Ile	313/ 675-1550	-

Minnesota

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1,2,3	Dick Kentfield	Hopkins	-	612/ 938-4382

Missouri

1,3,5	Whit Crowley	Manchester	-	314/ 394-7955
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Montana

1,2,3	Steve Bernbaum	Sheperd	406/373-6393	-
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1,2,3,4,5	Larry B. McEwen	Hastings	402/ 463-1387	402/ 463-2267
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3	Pete Crosta	Nutley	201/ 667-2928	201/ 667-6369
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1	David Edwards	Camden	609/ 966-6767	609/ 365-1359
1,3	Matthew Jones	Neptune	-	201/ 774-0983
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3	Linda Nixon	Chatham	-	201/ 635-0973
1,3	David Jay Scott	Wall	-	201/ 681-0600

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3	Cynthia Gillmore	Johnstown	518/ 725-4016	518/ 762-8483
3	Sister Mary Gregory	Watertown	315/ 788-4670	315/ 782-3460
3	Don Menges	Rochester	-	716/ 544-9398
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3	Quentin Packard	Troy	-	518/ 273-8867
3	Ken Silvo	Rochester	-	716/ 244-1912
1,2	David Strachen	Buffalo	716/ 634-8238	716/ 832-8869
1,2,3	Jerry Taylor	Hilton	716/ 964-3587	716/ 964-3319
1,3	Walter Taylor	W. Henrietta	716/ 263-7700	716/ 359-2857

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1	William Beasley	N. Olmsted	216/ 777-7700	216/ 933-4408
6	Mark Elliot	Hudson	216/ 686-2280	216/ 653-5006
1,3	Carman Greco	St. Clairsville	-	614/ 695-5026
1,2,3,4	Guy R. Moore	Oxford	513/ 746-6333	513/ 523-3797
1,2,3	Howard Moskowitz	Toledo	419/ 729-8412	419/ 535-8647

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1,2,3,4	Jim Emig	Portland	503/ 280-5666	503/ 771-1916
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Tennessee

3	Major Michael Sutter	Clarksville	502/ 798-8203	615/ 552-0973
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3	Martha (Polly) Davis	Baytown	-	713/ 422-7560
3	Ron Franzetti	Austin	-	512/ 331-8061
1	Jeff Holcomb	Carrollton	-	817/ 465-7978
1,3	Joseph Kline	Lubbock	-	806/ 796-0829
2,3	Ralph Logan, Jr.	Fort Worth	817/ 281-0661	-
1	Bob Oberholtzer	Houston	713/ 664-2011	713/ 664-1795

Virginia

1,3,6	Warren Downes	Yorktown	804/ 898-8386	804/ 898-1881
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Vermont

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Washington

5	Gary Cressman	Enumclaw	-	206/ 825-6909
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3	Peter Lee	Milwaukee	414/ 963-6180	414/ 344-6807
3	Paul Van Wyk	Appleton	414/ 731-0941	414/ 739-6503

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Hardware Review • 5 • The RocketChip: A New Way to Speed Up AppleWorks • Rodwell, David • RocketChip; accelerator; Zip Chip; TransWarp; Bits and Pieces

Software Review • 11 • RepairWorks: A Program that Recovers Damaged AppleWorks Files • Shanker, Bruce • Repair-Works; damaged files; data base; word processor

Software Review/Novice Note • 13 • How to Load ASCII Files into AppleWorks • Smith, James • word processor; data base; ASCII; damaged files

Spreadsheet Tip • 14 • How to Speed Up Large AppleWorks Spreadsheets • Merritt, Cathleen • spreadsheet; accelerator; AppleWorks 2.1

Hard Disk Primer • 15 • How to Select a Hard Disk Drive • Morrison, Gary R. • hard disks; hardware; Chinook; Sider; CMS; First Class Peripherals

Hard Disk Primer • 17 • Questions to Ask Your Dealer • n/a • hard disks; hardware

Hard Disk Primer • 18 • Hard Disk Drive Systems Compared (comparison table) • n/a • hard disks; hardware

Hard Disk Primer • 19 • Other Hard Disk Systems • Morrison, Gary R. • hard disks; SCSI; Macintosh; hardware

Hard Disk Primer • 20 • A Few Words About Sider Drives • Merritt, Cathleen • First Class Peripherals; Sider; hardware

Macro Primer • 22 • How to Control AppleWorks with Macros that Read the Screen • Munz, Mark • macros; UltraMacros

NAUG News • 27 • NAUG to Present AppleWorks Seminars at AppleFest • n/a • NAUG; AppleFest; seminars

NAUG News • 27 • First National NAUG Meeting on AppleLink • n/a • NAUG; AppleLink PE

News • 27 • A+ and inCider Magazines Merge • n/a • A+; inCider

News • 27 • New Communication Utility for AppleWorks Users • n/a • Message Board Editor; CompuServe

AppleWorks GS News • 28 • Claris Releases Free AppleWorks GS Update • Merritt, Cathleen • AppleWorks GS; Claris; update

Members Helping Members • 30 • How to Get Help with Apple Utility Software • Marriott, William • AppleWorks; special programs; ProDOS; Copy II+; utilities



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Seminar Schedule

NAUG sponsors AppleWorks seminars in various locations throughout the country. These seminars, entitled "AppleWorks: Beyond the Basics", are intended for AppleWorks users who want to solve AppleWorks problems and learn new techniques.

Seminar schedule:

April 7 — Smithtown, Long Island, NY
April 10 — Islin, NJ (Newark)
April 12 — College Park, MD
April 17 — Kalamazoo, MI
April 19 — Southfield, MI (Detroit)
April 24 — Columbus, OH
April 25 — Cincinnati, OH
May 4,6 — Boston, MA (AppleFest)
May 11 — Cleveland, OH
May 12 — Pittsburgh, PA

The presenter, Dr. Warren Williams, is a technical advisor to NAUG and a frequent contributor to the *AppleWorks Forum*. He has written more than 60 articles about AppleWorks and has conducted more than 75 AppleWorks seminars throughout the country. Write or call NAUG for more information.